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*Mattikalli, R.; Baraff, D.; Khosla, P.;*

Robotics and Automation, IEEE Transactions on , Volume: 12 , Issue: 2 , April

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**2 Interactive simulation of solid rigid bodies**

*Baraff, D.;*

Computer Graphics and Applications, IEEE , Volume: 15 , Issue: 3 , May 1991

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**3 Gravitational stability of frictionless assemblies**

*Mattikalli, R.; Baraff, D.; Khosla, P.; Repetto, B.;*

Robotics and Automation, IEEE Transactions on , Volume: 11 , Issue: 3 , June 1995

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**4 Physically-based manipulation on the Responsive Workbench**

*Frohlich, B.; Tramberend, H.; Beers, A.; Agrawala, M.; Baraff, D.;*

Virtual Reality, 2000. Proceedings. IEEE , 18-22 March 2000

Pages:5 - 11

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**5 Interaction with a real time dynamic environment simulation using magnetic levitation haptic interface device**

*Berkelman, P.J.; Hollis, R.L.; Baraff, D.;*

Robotics and Automation, 1999. Proceedings. 1999 IEEE International Conference on , Volume: 4 , 10-15 May 1999

Pages:3261 - 3266 vol.4

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**6 Global methods for simulating contacting flexible bodies**

*Baraff, D.; Witkin, A.;*

Computer Animation '94., Proceedings of , 25-28 May 1994

Pages:1 - 12

[\[Abstract\]](#) [\[PDF Full-Text \(916KB\)\]](#) [IEEE CNF](#)

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**7 Finding all gravitationally stable orientations of assemblies**

*Mattikalli, R.; Baraff, D.; Khosla, P.;*

Robotics and Automation, 1994. Proceedings., 1994 IEEE International Conference on , 8-13 May 1994

Pages:251 - 257 vol.1

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**8 Stability of assemblies**

*Mattikalli, R.; Khosla, P.K.; Repetto, B.; Baraff, D.;*

Intelligent Robots and Systems '93, IROS '93. Proceedings of the 1993 IEEE/International Conference on , Volume: 1 , 26-30 July 1993

Pages:652 - 661 vol.1

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We present an effective production-proven dynamics system. It uses an explicit time differencing method that is efficient, reasonably accurate, conditionally stable, and above all simple to implement. We describe issues related to integration of physically based simulation techniques into an interactive animation system, present a high level description of the architecture of the system, report on techniques that work, and provide observations that may seem obvious, but only in retrospect. Appli ...
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Johnny C. Lee , Jodi Forlizzi , Scott E. Hudson

**Proceedings of the 15th annual ACM symposium on User interface software and technology** October 2002

*Kinetic typography* --- text that uses movement or other temporal change --- has recently emerged as a new form of communication. As we hope to illustrate in this paper, kinetic typography can be seen as bringing some of the expressive power of film --- such as its ability to convey emotion, portray compelling characters, and visually direct attention --- to the strong communicative properties of text. Although kinetic typography offers substantial promise for expressive communications, it ...
- 3** Heads, faces, hair: A practical model for hair mutual interactions 80%

Johnny T. Chang , Jingyi Jin , Yizhou Yu

**Proceedings of the 2002 ACM SIGGRAPH/Eurographics symposium on Computer animation** July 2002

Hair exhibits strong anisotropic dynamic properties which demand distinct dynamic models for single strands and hair-hair interactions. While a single strand can be modeled as a multibody open chain expressed in generalized coordinates, modeling

hair-hair interactions is a more difficult problem. A dynamic model for this purpose is proposed based on a sparse set of guide strands. Long range connections among the strands are modeled as breakable static links formulated as nonreversible positional ...

**4** Session G: Image-based techniques in computer graphics: Expressive textures 80%



K. Fei

**Proceedings of the 1st international conference on Computer graphics, virtual reality and visualisation** November 2001

If a moving image is more expressive than words or than a still image, then an animated facial expression can explain more in depth the feelings of a virtual character. Facial animation has been used in many applications, from entertainment to research on virtual humans and tele-presence. The aim of most of the approaches is to achieve high degrees of realism of virtual characters and is supplemented by complex models of kinematics, muscle movement, movement of clothing as well as cognition and ...

**5** The EMOTE model for effort and shape 77%



Diane Chi , Monica Costa , Liwei Zhao , Norman Badler

**Proceedings of the 27th annual conference on Computer graphics and interactive techniques** July 2000

Human movements include limb gestures and postural attitude. Although many computer animation researchers have studied these classes of movements, procedurally generated movements still lack naturalness. We argue that looking only at the psychological notion of gesture is insufficient to capture movement qualities needed by animated characters. We advocate that the domain of movement observation science, specifically Laban Movement Analysis (LMA) and its Effort and Shape components, provides ...

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Adam Lake , Carl Marshall , Mark Harris , Marc Blackstein

**Proceedings of the first international symposium on Non-photorealistic animation and rendering** June 2000

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Wagner Toledo Corrêa , Robert J. Jensen , Craig E. Thayer , Adam Finkelstein

**Proceedings of the 25th annual conference on Computer graphics and interactive techniques** July 1998

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Nadia Magnenat Thalmann , Daniel Thalmann

**ACM Computing Surveys (CSUR)** March 1996

Volume 28 Issue 1

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Jessica K. Hodgins , Wayne L. Wooten , David C. Brogan , James F. O'Brien

**Proceedings of the 22nd annual conference on Computer graphics and interactive techniques** September 1995

77%

**10** The art and science of visualizing data

Karen A. Frenkel

**Communications of the ACM** February 1988

Volume 31 Issue 2

"I manipulate the laser," the artist said, having exploited laboratory equipment. "This is a parallel pipeline systolic SIMD engine we call the 'Jell-O Engine,'" the animator/straight man announced, but not until he had decimated the practice of ray tracing. And officials from supercomputer centers declared the visualization of scientific data would define a new field, a revolutionary way of doing science.

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